

Appl. No. 10/748,027
Amdt. dated October 27, 2004
Reply to Office Action of July 27, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A tire valve nut for mounting a valve stem to a wheel in a valve hole of the wheel, the tire valve nut comprising:

a shoulder formed along an inner wall of the tire valve nut at a lower end of the tire valve nut, the shoulder having a lower end and an upper end, wherein a diameter of the shoulder at the upper end is greater than a diameter of the shoulder at the lower end, and the shoulder is inclined from the lower end to the upper end; and

an O-ring elastic body arranged in the shoulder,

wherein when mounting the valve stem to the wheel in the valve hole, the tire valve nut is fastened to the valve stem and the O-ring elastically deforms and enters the valve hole to form a seal between the valve stem and the valve hole and between the valve stem and the tire valve nut.

2. (Cancelled)

3. (Currently Amended) The tire valve nut according to claim 1, wherein the O-ring elastic body is ring-like and has an outer diameter that is greater than an inner diameter of the shoulder.

4. (Original) The tire valve nut according to claim 1, wherein the inner wall of the tire valve nut includes a threaded portion fastenable to the valve stem, with the threaded portion being separated from the shoulder.

5. (Currently Amended) A tire valve for mounting in a valve hole of a wheel, the tire valve comprising:

a tire valve nut and a valve stem, wherein the tire valve nut is for mounting the valve stem to the wheel in the valve hole thereof, the tire valve nut including:

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a shoulder formed along an inner wall of the tire valve nut at a lower end of the tire valve nut, the shoulder having a lower end and an upper end, wherein a diameter of the shoulder at the upper end is greater than a diameter of the shoulder at the lower end, and the shoulder is inclined from the lower end to the upper end;

an O-ring elastic body arranged in the shoulder, wherein when mounting the valve stem to the wheel in the valve hole, the tire valve nut is fastened to the valve stem and the O-ring elastically deforms and enters the valve hole to form a seal between the valve stem and the valve hole and between the valve stem and the tire valve nut;

a grommet attached to the valve stem and contacting a wall of the valve hole to seal the tire when the valve stem is mounted to the wheel.

6. (Original) The tire valve according to claim 5, further comprising:
a transmitter that measures a condition of the tire to generate and transmit data.

7. (Cancelled)

8. (Currently Amended) The tire valve according to claim 5, wherein the O-ring elastic body is ring-like and has an outer diameter that is greater than an inner diameter of the shoulder.

9. (Original) The tire valve according to claim 5, wherein the inner wall of the tire valve nut includes a threaded portion fastenable to the valve stem, with the threaded portion being separated from the shoulder.

10. (Currently Amended) The tire valve according to claim 5, wherein the ~~elastic body and the grommet~~ elastically deforms and enters ~~deform and enter~~ a space between the wall of the valve hole and the valve stem when the valve stem is mounted to the wheel in the valve hole.